

REMARKS

Favorable reconsideration and allowance of this application are requested.

At the outset, applicants note with appreciation the Examiner's indication of allowable subject matter being defined by previously pending claims 11-16 and 32-34 subject to presentation in independent form. By way of the amendment instructions above, the subject matter of prior claim 11 has been introduced into claim 1, while the subject matter of claim 1 has been introduced into claim 14. Similarly, the subject matter of claim 32 has been introduced into claim 27, while the subject matter of claim 27 has been introduced into claim 34. Claims 11 and 32 have thus been cancelled as redundant in view of the claim amendments, while several of the claim dependencies have been changed for similar reasons.

Thus, claims 1-10, 12-31 and 33-34 which were previously presented for examination should now be in condition for allowance in view of the Examiner's reasoning noted on page 5, line 13 through page 6, line 9 of the official action.

Independent claim 41 and claims 42-43 dependent therefrom are new. In this regard, claim 41 essentially represents a combination of prior claims 1 and 5 in that it specifies the "oxidizing chemical" to be oxygen and/or hydrogen peroxide. Claims 42 and 43 respectively clarify that either the oxygen or hydrogen peroxide may be employed separately or that simultaneous combination of oxygen and hydrogen peroxide may be employed. Support for such new claims may be found in the originally filed specification at page 12, lines 10-12, for example.

Applicants suggest that new claims 41-43 are allowable over the applied references of record.

Specifically, in rejecting prior claim 5 (which defines the oxidizing chemical as oxygen or hydrogen peroxide or a derivative thereof), the Examiner acknowledges that

"...no disclosure of oxygen or hydrogen peroxide is given by Arhippainen for use as the oxidizing agent." However, the Examiner nonetheless asserts that it would be "obvious" (35 USC §103(a)) to use these well-known oxidizing agents. Applicants respectfully disagree.

In the method presented by Arhippainen, the principle technical trust is that total washing efficiency is increased mainly by lowering the pH value in one or several liquid cycles of the washing system by using some kind of acid. The pH of a washing filtrate is lowered to a value of 3 or lower. It is well known in the art that oxygen and hydrogen peroxide are *neutral* agents, which do not change the acid-base equilibrium of a washing filtrate or a fiber suspension, i.e. the pH does *not* change, as Arhippainen requires.

Further, Arhippainen uses acids, such as a sulfur dioxide solution, sulfurous acid, chlorine etc. for lowering the pH to 3 or less. A disadvantage of these acids is that the use thereof increases the chemical load of the liquid circulation system and thus disturbs the chemical balance of the process, such as the sulfur balance. The use of oxygen and hydrogen peroxide does not disturb the chemical balance.

In applicants' view, Arhippainen does not teach a process of performing the acidification prior to an alkaline oxygen stage, because this would be against the technical concepts of the Arhippainen process. It is disclosed (columns 1- 2) that a conventional bleaching is started with acid chlorine or chlorine dioxide stages and one advantage of the process is that the consumption of expensive bleaching chemicals is reduced when they are not consumed for neutralization of the pulp suspension coming from alkali digestion. If the pH is lowered according to Arhippainen in the washing just prior to an oxygen stage, the pH should be again increased for the oxygen stage. The pH of the Arhippainen process is below 3, whereas the pH of the oxygen stage is over 7.5, preferably 8.5-14 (page 14 of the application). If the acid used in the Arhippainen process is located between two alkaline process stages (digestion and oxygen stage),

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August 5, 2003

the chemical consumption is increased when chemicals are needed for the pH adjustment. Thus, the savings in the chemical consumption as taught by Arhippainen are not obtained. According to the teachings of Arhippainen the treatment of the washing solution with acid is arranged prior to an acid bleaching stage, not an alkaline oxygen stage.

Therefore, one of ordinary skill in this art would clearly not be lead by Arhippainen to employ oxygen and/or hydrogen peroxide in the manner defined by applicants' new claims 41-43. As such, claims 41-43 are allowable along with claims 1-10, 12-31 and 33-34. Official Notice to that effect is therefore solicited.

Respectfully submitted,

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